



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,910	05/20/2002	Christof Roscher	060953-0131	9922

7590 11/30/2004  
Stephen A Bent  
Foley & Lardner  
Washington Harbour  
3000 K Street NW Suite 500  
Washington, DC 20007-5143

EXAMINER

HAMILTON, CYNTHIA

ART UNIT	PAPER NUMBER
----------	--------------

1752

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/030,910

Applicant(s)

ROSCHER, CHRISTOF

Examiner

Cynthia Hamilton

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-14 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-14 and 16-24 is/are rejected.
- 7) ☒ Claim(s) 2-5, 7, 19-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

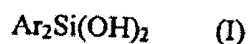
3. Claims 1-9, 11-14, 16-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no disclosure to the additional co-condensable compounds set forth in the instant claims with an example being found both in claim 1 and claim 3 being elemental as now claimed. The co-condensable compounds being elements in claim 1 and claim 17 then being comprised of compounds clearly not elements in claims 2-4. The meaning of now “compound selected from the group consisting of boron, aluminum, silicon, germanium, titanium and zirconium” is different than the original wording of “compounds of boron, aluminum, silicon, germanium, titanium and zirconium. There are no examples using boron or aluminum or silicon or germanium or titanium or zirconium in the specification in this manner. What is used are compounds comprised of boron, aluminum, silicon, germanium, titanium or zirconium. Thus, applicants have amended the claims to cover material not originally disclosed.

4. Claims 1-9, 11-14, 16 and 20-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

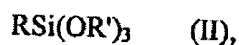
applicant regards as the invention. The examiner finds confusing the double reference to "silicic acid polycondensate" in claim 1. In line one, it is the claimed product of the invention, and in line 12, it is the "resulting silicic acid polycondensate of the production started in line 2 of claim 1. Finally, in the penultimate line of claim 1, "said polycondensate further comprising a photoinitiator" is found. The examiner believes applicants intended that the photoinitiator be added to a composition comprised of the silicic acid polycondensate, but as now written, the scope of the claim is unclear. Is the photoinitiator part of the condensate? Is a silicic acid polycondensate incorporating a photoinitiator in its structure being claimed or a composition comprised of a photoinitiator and a silicic acid polycondensate claimed? For this reason claims 1-9, 11-14, 16 and 20-24 are found confusing.

5. Claims 2-5, 7, and 20-21 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 2-5, 7, and 20-21 do not limit the condensable compound to boron, aluminum, silicon, germanium and/or zirconium as required by claim 1 but instead reference compounds of boron, aluminum, silicon, germanium and/or zirconium wherein "of" is not meant to be the same as "the group consisting of" but instead of means "comprising" as used by applicants on page 9. For further clarification of this objection see paragraph preceding this one. The examiner suggests the following wording for claim 1 to overcome the above rejections. This claim was cut and pasted into place the underlines are not to be taken as required. The examiner suggests a clean claim set with cancellation of the original set of claims with concomitant renumbering throughout.

"A composition comprising a photoinitiator and a silicic acid polycondensate produced by condensing one or more organically modified silanediols of the general formula I



with one or more organically modified silanes of the general formula II



wherein said condensation is performed without the addition of water,  
wherein the molar ratio of said organically modified silanediols of general formula I to said organically modified silanes of the general formula II which form the resulting silicic acid polycondensate is 1 : 1,  
wherein up to 90 mole percent of said silane of formula II can be replaced by one

or more co-condensable compounds selected from the group consisting of boron compounds, aluminum compounds, silicon compounds, germanium compounds, titanium compounds and zirconium compounds,

and wherein the substituents Ar, R and R' on said organically modified silanediols of general formula I and said organically modified silanes of general formula II

are identical or different and have the following meanings:

- Ar = a radical having 6 to 20 carbon atoms and at least one aromatic group,  
R = an organic radical having 2 to 15 carbon atoms and at least one epoxy group and/or at least one C=C double bond,  
R' = methyl or ethyl,

wherein the photoinitiator is present said composition in a quantity effective for photochemical curing via UV.

Art Unit: 1752

Then claims 2-9, 11-14, 16, and 21-23 need to be amended to be drawn to the composition of claim 1 instead of the polycondensate. The wording for the beginning of claim 2 could be as follows:

“The composition of claim 1 wherein said one or more co-condensable compounds comprise...”

6. Claims 4, 7/4 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In lines 10-11,  $R_1$  is partially defined via  $R_2$  and  $R_2$  is defined partially by  $R_2$ . Thus, the full scope of  $R_2$  is undefined because of the circular nature of the definition of  $R_2$ . Further, because of the 2 being a subscript, the examiner is unsure whether the problem lies in  $R_2$  being at one time a variable and at another time two R groups. In the general formula V is found  $R_1$  but below  $R^1$  is defined. This definition of  $R^1$  seems superfluous unless an error was made in putting  $R_1$  in the formula V. Since R is defined in claim 1 upon which claims 4, 7/4 and 21 depend, then the R in general formula V is limited to that of claim 1. Thus the formula II and V appear to be the same. The original claims had  $R^1$  in formula V as do the claims before this amendment. For the examiner, for examination purposes assumes a typographical error has occurred and examines Formula V as if  $R^1$  is present. For these reasons, claims 4, 7/4 and 21 are held indefinite.

7. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Applicants are reminded that a dependent claim is directed to a

combination including everything recited in the base claim and what is recited in the dependent claim. It is this combination that must be compared with the prior art, exactly as if it were presented as one independent claim. Claim 7/2 does not have general formulas IV or V present thus, the scope of claim 7/2 is broader than that of claim 2 upon which it depends. Claim 7/3 does not have general formulas III or V present thus it is broader than claim 3 upon which it depends. Claim 7/4 does not have general formulas II or V present thus it is broader than claim 4 upon which it depends. Thus, claim 7 is improperly dependent upon claims 2-4. See particularly MPEP 608.01 (n). The examiner suggests that claim 7 be broken up into three claims with separate dependencies upon claims 2-4 wherein each dependent claim is properly limited to those formulas present in each claim to remove this objection.

8. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no clear antecedent basis for "general formula V" or "R<sup>1</sup>" in claim 1 there is insufficient antecedent basis for this limitation in the claim. Such terms are found in claim 4 not in claim 1. Thus, the meaning of claim 11 is unclear.

9. The examiner notes that claim 13 allows the addition of a new component to the reaction medium set forth in claim 1 to make the instant polycondensate. Thus, the reaction medium of claim 1 is clearly not limited to only those components set forth to form the polycondensate. By adding polysiloxanes in claim 13 applicants have made clear such additions are open. The only limits are that compounds of Formula (I) and Formula (II) be present in specific molar ratio and that no water be present. The addition of polysiloxanes is not put forth as one of the co condensable compounds that can make up part of Formula (II). There is no requirement in claim

Art Unit: 1752

13 that the polysiloxane of claim 13 be made from 1:1 molar ratio of formula I:II as set forth in claim 1. There is no requirement that the polysiloxanes of claim 13 be condensed without water being present. Thus, the scope of the condensate of the instant invention is clearly broad enough to include any reactant. The examiner states this because claim 1 before amendment had "or precondensates derived therefrom" in reference to formulas I and II as a limit on claim 1. This limit is gone. Thus, previously the polysiloxane of claim 13 could be considered the "precondensate" addressed in claim 1. Now, it is a new reactant.

10. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 19 is broader in scope than claim 1 because the method of claim 19 makes the precondensates of claim 17 and other silicic acid polycondensates made by precondensates derived from formulas I and II wherein compounds of formula I are not required present as in the making of the silicic acid polycondensate of claim 17. Thus, the scope of the method of claim 19 is broader than that of the product made in claim 17.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period



Art Unit: 1752

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is 571-272-1331.

The examiner can normally be reached on Monday through Friday 9:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on (571) 272-0729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**CYNTHIA HAMILTON**  
**PRIMARY EXAMINER**

November 29, 2004

Cynthia Hamilton  
Primary Examiner  
Art Unit 1752